P13154 PATENT

CLAIM AMENDMENTS:

1. (Currently amended) A method of monitoring host signal quality, comprising:
embedding a watermark in a data set, the watermark derived by quantizing the host signal using an ensemble of quantizers;
processing the data set using ~~some~~ a parameter set~~,~~;
determining ~~presence of data corruption of the data set with respect to an original data set~~ degradation of the host signal quality by recovering a signal in the data set~~measuring the amount of a recovered watermark,~~; and
adjusting the parameter set for ~~the data~~ processing the data set based on the ~~presence of data corruption~~ recovered signal.

2. (Original) The method of claim 1, further comprising processing the data set by transform encoding the data set.

3. (Original) The method of claim 1, further comprising processing the data set by packetizing and transmitting the data set.

4. (Original) The method of claim 1, further comprising identifying image frame errors in packet transmitted audiovisual data sets.

5. (Original) The method of claim 1, wherein adjusting the parameter set further comprises modifying network bandwidth to compensate for data corruption of the data set.

6. (Currently amended) The method of claim 1, wherein determining degradation of the host signal quality ~~presence of data corruption~~ further comprises quantitatively measuring spatial extent of corruption of image data sets.

7. (Currently amended) The method of claim 1, wherein determining degradation of the host signal quality ~~presence of data corruption~~ further comprises quantitatively measuring temporal duration of corruption of data sets.

8. (Currently amended) An article comprising a computer readable medium to store computer executable instructions, the instructions defined to cause a computer to monitor host signal quality by:

embedding a watermark in a data set, the watermark derived by quantizing the host signal using an ensemble of quantizers;

processing the data using ~~some~~ a parameter set,

determininge ~~presence of data corruption in the data set without access to the original data set with respect to an original data set~~ degradation of the host signal quality by recovering a signal in the data set; ~~measuring the amount of a recovered watermark,~~ and

adjusting the parameter set for ~~the data~~ processing the data based on the ~~presence of data corruption~~ recovered signal.

A1

9. (Currently amended) The article comprising a computer readable medium to store computer executable instructions of claim 8, wherein the instructions further cause a computer to monitor the host signal quality by ~~process the data set by~~ transform encoding the data set.

10. (Currently amended) The article comprising a computer readable medium to store computer executable instructions of claim 8, wherein the instructions further cause a computer to monitor the host signal quality by ~~process the data set by~~ packetizing and transmitting the data set.

11. (Currently amended) The article comprising a computer readable medium to store computer executable instructions of claim 8, wherein the instructions further cause a computer to monitor the host signal quality by identifying image frame errors in packet transmitted audiovisual data sets.

12.(Currently amended) The article comprising a computer readable medium to store computer executable instructions of claim 8, wherein the instructions further cause a computer to monitor the host signal quality by ~~adjust the parameter set by~~ modifying network bandwidth to compensate for data corruption of the data set.

13. (Currently amended) The article comprising a computer readable medium to store computer executable instructions of claim 8, wherein the instructions further cause a computer to monitor the host signal quality by ~~determine presence of data corruption by~~ quantitatively measuring spatial extent of corruption of image data sets.

14. (Currently amended) The article comprising a computer readable medium to store computer executable instructions of claim 8, wherein the instructions further cause a computer to monitor the host signal quality by ~~determine presence of data corruption by~~ quantitatively measuring temporal duration of corruption of data sets.

15. (Currently amended) A ~~data degradation measurement~~ system for monitoring host signal quality, comprising

a watermarking module to embed a recoverable watermark in a data set, the watermark derived by quantizing the host signal using an ensemble of quantizers;

a processing module for modifying the data using ~~some~~ a parameter set~~,~~; and

a watermark recovery module to determine ~~presence of data corruption of the data set with respect to an original data set~~ degradation of the host signal quality by recovering a signal in the data set ~~measuring the amount of a recovered watermark~~.

16. (Currently amended) The ~~method~~ system of claim 15, wherein the processing module further comprises a transform encoding processor to process the data set by transform encoding the data set.

17. (Currently amended) The ~~method~~ system of claim 15, wherein the processing module further comprises a packetizer to process the data set by packetizing and transmit the data set.

18. (Currently amended) The ~~method~~ system of claim 15, wherein the watermark recovery module further detects image frame errors in packet transmitted audiovisual data sets.

19. (Currently amended) The ~~method~~ system of claim 15, wherein the processing module adjusts the parameter set by modifying network bandwidth to compensate for data corruption of the data set.

20. (Currently amended) The ~~method~~ system of claim 15, wherein the watermark recovery module quantitatively measures spatial extent of corruption of image data sets.

21. (Currently amended) The ~~method~~ system of claim 15, wherein the watermark recovery module quantitatively measures temporal duration of corruption of data sets.

22. (Currently amended) The ~~method~~ system of claim 15, further comprising a back channel transmitter to communicate information to the processing module to adjust the parameter set for the data processing based on the presence of data corruption detected by the watermark recovery module.

23 - 27. (Cancelled) Please cancel these claims without prejudice.

28. (Currently amended) A method of monitoring host signal quality, comprising:
embedding a watermark in a data set to allow reception-side determination of quality of the data set ~~with respect to an original data set~~ by measuring the amount of a recovered watermark, the watermark derived by quantizing the host signal using an ensemble of quantizers;
transmitting the data set having the embedded watermark~~;~~ and
accepting information about the recovered watermark ~~determined quality of the transmitted data set~~ and utilizing the recovered watermark to adjust~~ing~~ at least one of a data encoding parameter ~~or~~ and a transmission parameter ~~in response~~ for at least one later transmitted data set.

29. (Cancelled) Please cancel this claim without prejudice.